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Report to Congressional Requesters

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SUGAR PROGRAM

Changing the Method for Setting Import Quotas Could Reduce Cost to Users

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Resources, Community, and
Economic Development Division

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The Honorable Dianne Feinstein
United States Senate

The Honorable George Miller
House of Representatives

In 1998, U.S. consumers used 9.9 million tons of sugar, about 16 percent of which was imported. The amount of sugar imported into the United States is determined annually by the U.S. Department of Agriculture (USDA), which administers the U.S. sugar program. Under this program, USDA insulates domestic sugar producers (growers and processors) from lower world prices for raw sugar by restricting the supply of sugar that can be imported at a low tariff rate (this amount is known as the tariff-rate quota). The U.S. Trade Representative (USTR), working with USDA, allocates shares of the tariff-rate quota among 40 designated countries. By law, the sugar program also supports domestic sugar prices by offering loans to processors at a rate of 18 cents per pound for raw cane sugar and 22.9 cents per pound for refined beet sugar, with the sugar serving as collateral for these loans. The program allows sugar processors to forfeit their sugar to the federal government instead of repaying their loans; this is likely to happen if domestic sugar prices fall below a certain level—the loan rate plus certain costs that processors would no longer incur if they forfeited.

You expressed concern about USDA's and USTR's administration of the tariff-rate quota for imported sugar and its effect on U.S. cane sugar refiners and other consumers. Specifically, you asked us to describe and evaluate (1) USDA's procedures for setting the tariff-rate quota for imported raw sugar and (2) USTR's procedures for allocating the quota among sugar-producing countries.

Results in Brief

USDA uses the tariff-rate quota for raw sugar to restrict low-cost imports and maintain domestic prices at sufficiently high levels to prevent processors from forfeiting on their sugar loans. USDA sets the tariff-rate quota at the beginning of the fiscal year and may adjust its size three times during the year. In setting and adjusting the quota level, USDA compares year-end projections of the sugar stocks held by U.S. producers with projections of domestic sugar use (an indicator known as the stocks-to-use ratio). Generally speaking, a low stocks-to-use ratio is associated with a lower tariff-rate quota, tighter supplies, and higher

prices; a high stocks-to-use ratio is associated with a higher tariff-rate quota, larger supplies, and lower prices. The relatively low stocks-to-use ratios used by USDA have resulted in low tariff-rate quotas and tight domestic supplies of sugar. In recent years, domestic sugar prices were over 2 cents more per pound than was needed to avoid sugar loan forfeitures. We estimate that domestic sugar users incur a cost of $200 million annually for each penny in excess of the estimated price needed to avoid forfeitures.

Once the initial size of the tariff-rate quota for imported raw sugar is set, USTR allocates shares of it among the 40 countries designated as sugar exporters under the tariff-rate quota on the basis of their exports to the United States between 1975 and 1981. Quota allocations for individual countries have not been revised for 17 years, despite dramatic changes in global market conditions, including changes in many countries' ability to produce and export sugar. Additionally, the United States imported, on average, about 3 percent less sugar than the quota allowed from 1996 through 1998 because some countries did not fill their allocations. Because the shortfalls in the tariff-rate quota reduced total U.S. sugar supplies by less than 1 percent, they had a minimal effect on the domestic price of sugar. However, domestic sugar refiners expressed concern that these shortfalls have limited their ability to obtain sugar. We identified several options that could be used to fill the tariff-rate quota more completely and better reflect the world cane sugar market. For example, the allocation process could be adjusted by redistributing unused quota allocations to countries that could fill them; or a different allocation method, such as filling quotas on a first-come, first-served basis, could be used. Any changes to the current allocation method would have to be consistent with U.S. trade agreements, according to USTR officials.

We make recommendations to the USDA and USTR to make the sugar program operate more effectively and at less cost to domestic sugar users.

Background

The United States and many other countries have protected their domestic growers and processors of cane sugar and beet sugar[1] from lower world prices through quotas and/or high tariffs that restrict the supply of imported sugar. From 1996 through 1998, U.S. raw sugar prices averaged 22.2 cents per pound, while world raw sugar prices averaged 11.6 cents per

[1]Sugar comes from sugarcane and sugarbeet plants that must undergo processing to extract the sugar. Beet sugar is transformed directly into refined sugar by beet processors. Sugarcane typically is milled into raw sugar and then is sent to a refinery, which further processes it into refined sugar for consumption.

pound; currently, the world price is about 6 cents per pound. (See table I.1 in app. I.) The United States has relied on imports to meet as much as 23 percent of the domestic demand for sugar in recent years. (See table I.2 in app. I.)

The current U.S. sugar program, administered by USDA, consists of (1) a tariff-rate quota that limits the amount of raw sugar that can be imported at a lower tariff rate and (2) a domestic commodity loan program for processors whose loan rate has effectively established a minimum price for domestic sugar producers. Under the Agriculture and Food Act of 1981, as amended, sugar processors can obtain loans from USDA's Commodity Credit Corporation by pledging their sugar as collateral.[2] If processors find that domestic sugar prices are too low, they can forfeit the sugar that secured their loans to the federal government rather than repay their loans in cash. The Federal Agriculture Improvement and Reform Act of 1996, commonly known as the 1996 Farm Act, modified the sugar program, in part, by (1) legislatively establishing the loan rate at 18 cents per pound for raw cane sugar and 22.9 cents per pound for refined beet sugar (2) assessing a 1-cent penalty on each pound of raw cane sugar and a 1.07-cent penalty on each pound of refined beet sugar forfeited to the government, (3) eliminating a requirement that the sugar program operate at no net cost to U.S. taxpayers, and (4) limiting processors' opportunities to forfeit their sugar by not allowing such forfeitures if the tariff-rate quota is 1.5 million tons or less.[3] USDA also administers a tariff-rate quota for refined sugar that is substantially smaller—about 28,000 tons annually.[4]

In 1990, in response to a decision under the General Agreement on Tariffs and Trade, the United States moved from an absolute quota, which limited the total amount of sugar that could be imported each year, to a tariff-rate quota for imported raw sugar. In 1994, the United States agreed to administer the tariff-rate quota, including the allocation of quota shares, in a manner that is consistent with its commitments under the World Trade Organization (WTO) Agreement on Agriculture.[5] The United States also agreed to set the tariff-rate quota for raw cane sugar at 1.26 million tons or

[2]Sugar processors are required to pay growers a government-specified minimum price, equivalent to about 60 percent of the loan.

[3]All ton measurements in this report are short tons. A short ton equals 2,000 pounds.

[4]This amount does not include Mexican sugar imported under the North American Free Trade Agreement.

[5]WTO was established on January 1, 1995, as a result of the Uruguay Round of the General Agreement on Tariffs and Trade. WTO facilitates the implementation, administration, and operation of multiple agreements that govern trade among its member countries.

higher each year.[6] Sugar imported under the tariff-rate quota is either assessed no tariff or a 0.63-cent-per pound tariff, while imports above this limit are assessed a 15.82-cent-per-pound tariff, which has made them prohibitively expensive.[7] Alternatively, domestic refiners can import raw sugar that is exempt from the tariff-rate quota and higher tariffs if the refined sugar is (1) re-exported or used in a product that is re-exported or (2) used to make polyhydric alcohol for producing certain sugarless products.[8] This imported sugar is commonly known as the quota-exempt market.

In 1993, we reported that the sugar program cost domestic sweetener users over $1 billion annually in higher prices from 1989 through 1991.[9] Because of these higher prices, domestic producers, foreign importers to the U.S. market, and producers of sugar alternatives such as high-fructose corn syrup received higher incomes than they would have if the program did not exist. We also found that these benefits were concentrated among relatively few beneficiaries. We concluded that the U.S. market price for sugar should be lowered and that the Congress should consider legislation to move the sugar industry toward a more open market. To achieve a lower market price, we recommended that the Congress gradually lower the loan rate for sugar and direct USDA to adjust import quotas accordingly. Reducing the loan rate gradually would allow producers time to make orderly adjustments. The 1996 Farm Act did not revise the sugar program along the lines that we had recommended.

USDA has not officially determined the cost of the U.S. sugar program to domestic sugar users. Estimating the total cost of the sugar program to users is controversial because the total cost is not a simple difference between current U.S. and world sugar prices. Instead, the cost estimate depends in part on assumptions about how much the world price would rise if the United States did not have a sugar program. The added cost could also be based on an estimate of what the world sugar price would be if all countries eliminated programs that support their sugar industries. Nevertheless, as we and others have shown, higher U.S. sugar prices result in increased costs of hundreds of millions of dollars per year to U.S. sugar users.

[6]USDA's tariff-rate quota has been above the 1.26-million-ton minimum requirement each year.

[7]Under the North American Free Trade Agreement, the tariff for Mexican sugar imported outside the tariff-rate quota will gradually be reduced from 15.6 cents per pound in 1994 to zero cents per pound in 2008. The high tariff for Mexican sugar is 13.6 cents per pound in 1999.

[8]7 C.F.R., Part 1530.

[9]Sugar Program: Changing Domestic and International Conditions Require Program Changes (GAO/RCED-93-84, Apr. 16, 1993).

USDA's Administration of the Tariff-Rate Quota Has Unnecessarily Increased Prices to Users

USDA's Foreign Agricultural Service (FAS) sets the size of the tariff-rate quota for raw sugar to limit the amount of imported sugar in the domestic market and maintain sufficiently high domestic sugar prices to prevent sugar processors from forfeiting their loans. FAS sets the tariff-rate quota at the beginning of each fiscal year using a formula that is intended to achieve a year-end stocks-to-use ratio of 14.5 percent. FAS reserves a portion of the tariff-rate quota that it will make available during the fiscal year only if the projected year-end stocks-to-use ratio is 15.5 percent or lower. The size of the stocks-to-use ratio is important because a low stocks-to-use ratio is associated with a smaller tariff-rate quota, tighter supplies, and higher prices; a high stocks-to-use ratio is associated with a higher tariff-rate quota, larger supplies, and lower prices. As a result of FAS' use of these stocks-to-use ratios, the tariff-rate quota has maintained the domestic sugar price at more than 2 cents per pound over the price needed to avoid sugar loan forfeitures. We estimate that current domestic prices cost domestic sugar users about $200 million annually for every penny in excess of the estimated price for avoiding sugar loan forfeitures.

FAS Uses a Stocks-To-Use Ratio in Setting the Annual Tariff-Rate Quota

Since fiscal year 1997, FAS has set the annual tariff-rate quota for imported raw sugar at the beginning of each fiscal year and made any adjustments to its size at three subsequent intervals. As a fiscal year begins, FAS calculates the tariff-rate quota by incorporating the World Agriculture Supply and Demand Estimates (WASDE) September forecasts for U.S. sugar production, consumption, and beginning and ending stocks into a formula that targets a year-end stocks-to-use ratio of 14.5 percent.[10] Typically, FAS has allowed about 70 percent of this tariff-rate quota to be allocated among eligible exporting countries while reserving the remaining 30 percent for possible allocation—in 10-percent increments—in January, March, and May. At each of these points, FAS released a 10-percent increment only if the current WASDE projection of the stocks-to-use ratio was 15.5 percent or lower.

Table 1 shows the results of FAS' process for setting and adjusting the tariff-rate quota for imported sugar during the past 3 years. In fiscal year 1999, for example, FAS used its formula to initially set the tariff-rate quota at 1.78 million tons on the basis of the September 1998 WASDE sugar

[10]The WASDE projections are based on (1) domestic sugar production and consumption data, including sugar crop data from USDA's National Agricultural Statistics Service; (2) market trend analysis, using econometric models and spreadsheets; and (3) professional knowledge about domestic market conditions. WASDE projections are developed by USDA's Interagency Commodity Estimates Committee, which is composed of officials from the Foreign Agricultural Service's Import Policies and Programs Division, the Farm Service Agency, the Economic Research Service, and the World Agricultural Outlook Board.

projections and a year-end stocks-to-use ratio of 14.5 percent. FAS initially allocated 1.28 million tons and reserved the remaining 500,000 tons in three 165,000-ton increments. FAS did not release any of the increments in January, March, or May 1999 because WASDE's projected year-end stocks-to-use ratio was greater than 15.5 percent, effectively reducing the tariff-rate quota to 1.28 million tons for fiscal year 1999.

Table 1: FAS' Tariff-Rate Quota for Imported Sugar, Fiscal Years 1997-99

Tons in thousands

Fiscal year	Announced tariff-rate quota	Amount initially released for allocation	January increment	March Increment	May increment	Total tariff-rate quota
1997	2,535	1,874	0	221	221	2,315
1998	1,984	1,323	0	221	221	1,764
1999	1,780	1,284	0	0	0	1,284

Note: Numbers may not add because of rounding.

Source: GAO's analysis of USDA's data.

It is difficult to evaluate the basis of FAS' decisions in setting or adjusting the tariff-rate quota for imported raw sugar because USDA does not have detailed records documenting the process. The Interagency Commodity Estimates Committee, which develops the WASDE projections, does not make minutes of its meetings available to the public and does not document the specific assumptions or analysis used to develop its estimates. FAS officials cited historical practices for using a year-end stocks-to-use ratio of 14.5-percent to set the tariff-rate quota and a 15.5 percent ratio for making subsequent adjustments.

In clarifying FAS' basis for setting the tariff-rate quota, we asked the FAS official responsible for administering the sugar program whether attaining a specific market price for sugar is a factor in establishing the size of the tarriff-rate quota. The official told us that FAS does not have a target price for sugar. Instead, FAS uses the year-end stocks-to-use ratio to manage the size of the tariff-rate quota, which indirectly influences sugar prices. USDA's Economic Research Service has identified an historical relationship between the stocks-to-use ratio and the market price in a fiscal year's fourth quarter.[11] Specifically, a 15.5 percent stocks-to-use ratio is associated with a market price of 22.22 cents per pound of raw sugar, and

[11]The mathematical relationship is expressed in the following manner: Price equals 27.82 minus the product of 0.361 multiplied by the stocks-to-use ratio. See Economic Research Service, USDA, Sugar and Sweeteners: Situation and Outlook, (March 1996, p. 15).

a 14.5 percent stocks-to-use ratio is associated with a market price of 22.59 cents per pound. By using these stocks-to-use ratios to establish the tariff-rate quota each year, FAS has effectively maintained an average domestic sugar price of 22.2 cents in the fourth quarters of fiscal years 1997 and 1998. (See table I.3 in app. I.)

Small Tariff-Rate Quota Has Resulted in Higher Than Necessary Sugar Prices

Sugar processors who obtain USDA loans must receive a price that is higher than their loan rate and certain additional costs in order to induce them to sell in the market and to discourage them from forfeiting their sugar. USDA uses the tariff-rate quota to restrict the supply of imported sugar and raise the domestic market price.[12] However, we found that USDA has restricted the tariff-rate quota more than necessary—domestic sugar prices are higher than necessary to encourage processors to sell their sugar in the market.

Prior to 1998, USDA estimated prices called the "minimum cane or beet sugar prices to discourage forfeiture" using the 1996 Farm Act's loan rates of 18 cents per pound for raw cane sugar and 22.9 cents per pound for wholesale refined beet sugar.[13] These minimum prices generally are a couple of cents above the mandatory loan rates because they need to cover additional transportation costs, certain marketing costs, and accrued interest on the loan.[14] For raw cane sugar in crop year 1997 (which corresponds to fiscal year 1998), USDA's minimum prices to discourage forfeiture ranged from 19.2 to 20.9 cents per pound, depending upon the location of the regional sugar cane market.[15] Likewise, for wholesale refined beet sugar, these prices ranged from 23.2 to 26.7 cents per pound. (See app. II for a more detailed description of USDA's "minimum prices to discourage forfeiture.") By contrast, domestic prices

[12]While the tariff-rate quota restricts the overall supply of sugar and thus influences beet sugar prices, the connection with these prices is more indirect. Compared with the cane sugar market, production differences from factors such as weather can lead to greater market price variability in the beet sugar market.

[13]Because USDA did not estimate a minimum price to discourage forfeitures for crop year 1998, we used the minimum price estimate of an agricultural consulting firm, which used USDA's methodology.

[14]These costs are included in the minimum price because a sugar processor would not incur them if the sugar were forfeited.

[15]The Omnibus Consolidated and Emergency Supplemental Appropriations Acts for 1999 (P.L. 105-277) directed that USDA, in calculating prices that discourage forfeiture, cannot consider a 1-cent-per-pound penalty that would be imposed if a processor forfeited sugar to the government. However, we included this forfeiture penalty because a processor would consider it in deciding whether to forfeit sugar.

averaged 22.09 cents per pound for cane sugar and 26.37 cents per pound for beet sugar in fiscal year 1998.[16]

Table 2 shows the difference between the U.S. market prices for raw cane sugar and the estimated minimum prices needed to avoid loan forfeitures for crop years 1996 through 1998, using USDA's methodology. The market price for raw cane sugar averaged over 2 cents per pound above the minimum price needed to avoid forfeiture between crop years 1996 and 1998. (See table III.1 in app. III.) These market prices indicate that the tariff-rate quota was more restrictive than necessary to keep domestic sugar prices above the minimum price to avoid sugar loan forfeitures.

Table 2: Difference Between U.S. Raw Cane Sugar Market Prices and Minimum Prices Needed to Avoid Loan Forfeitures, Crop Years 1996-98

Cents per pound

Fiscal year	Weighted average U.S. market price for raw cane	Crop year	Weighted average minimum price to avoid loan forfeiture for raw cane	Difference between market price and forfeiture price
1997	22.00	1996	19.94	2.07
1998	22.09	1997	19.93	2.17
1999	22.00[a]	1998	19.89	2.11
Average	**22.03**		**19.92**	**2.11**

Note: The weighted yearly market prices, the prices to avoid forfeiture, and the average differences in price are weighted by the regional production of raw cane sugar. Loan forfeiture prices for a crop year were compared with the next year's fiscal year market prices because sugar grown and harvested in a crop year is sold in the following fiscal year. Numbers may not add because of rounding.

[a]The average market price for fiscal year 1999 is a projection from the 1999 USDA baseline.

Source: GAO's analysis using futures contract prices for number 14 raw cane sugar on the New York Coffee, Sugar and Cocoa Exchange and USDA's methodology for calculating the minimum prices needed to avoid loan forfeitures.

Table 3 shows the differences between U.S. wholesale refined beet prices and the estimated minimum prices needed to avoid loan forfeitures for crop years 1996 through 1998. We found that the market price for refined beet sugar averaged more than 3 cents higher than the minimum price needed to avoid forfeiture, suggesting again that the tariff-rate quota was unnecessarily restrictive for operating the sugar program without forfeitures. In the Red River Valley area of Minnesota and eastern North Dakota—the largest U.S. beet-producing region—the average price spread

[16]Average sugar prices are based on regional sugar production estimates.

between the estimated minimum price and the market price during 1998 was over 4 cents per pound. (See table III.2 in app. III.) The spread was somewhat smaller in other regions and in fact was slightly negative in 1997 in two of the seven regions where production was smaller.[17] Nevertheless, there were no loan forfeitures in any region during this time.

Table 3: Difference Between U.S. Wholesale Refined Beet Sugar Prices and Minimum Prices Needed to Avoid Loan Forfeitures, Crop Years 1996-98

Cents per pound

Fiscal year	Weighted average U.S. wholesale refined beet price	Crop year	Weighted average minimum price to avoid forfeiture for beets	Difference between average market price and forfeiture price
1997	28.55	1996	24.31	4.24
1998	26.37	1997	24.40	1.97
1999	27.76[a]	1998	24.37	3.38
Average	**27.56**		**24.36**	**3.20**

Note: The yearly average refined beet prices, the prices to avoid forfeiture, and the differences in price are all weighted by the regional production of beet sugar for crop years 1996 through 1998. Loan forfeiture prices for a crop year were compared with the following fiscal year's market prices because sugar grown and harvested in a crop year is sold in the following fiscal year. Numbers may not add because of rounding.

[a]The average wholesale refined beet market price is an average of the fiscal year to date, through May 1999.

Source: GAO's analysis using U.S. wholesale refined beet sugar prices from Milling and Baking News, midwestern and western markets, and USDA's methodology for calculating minimum prices needed to avoid loan forfeitures.

Since market prices for cane and beet sugar are higher than the minimum price needed to avoid forfeitures, they result in higher costs for refiners and sugar users. We estimate that, with total cane and beet sugar consumption of about 10 million tons in 1998 and other things being equal, a 1-cent per pound difference in the price of sugar translates into an additional cost to sugar users of about $200 million per year.[18]

[17]In crop year 1997, the market price was slightly below the loan forfeiture price in the Michigan and Ohio region (–0.05 cents per pound) and the Texas region (–0.43 cents per pound). These regions constituted about 9 percent and less than 1 percent, respectively, of total yearly sugar beet production for the 1996 through 1998 crop years.

[18]This estimate was derived by multiplying 1 cent by total sugar consumption of approximately 10 million tons in 1998 multiplied by 2,000 pounds per ton.

Adjustments to Current Allocation May More Completely Fill the Tariff-Rate Quota and Better Reflect World Market Conditions

Once the tariff-rate quota is established, USTR allocates shares of it among the 40 countries that were designated in 1982 as sugar exporters to the United States under the tariff-rate quota on the basis of their exports to the United States between 1975 and 1981. However, the allocations of the tariff-rate quota, which have remained substantially unchanged for 17 years, do not reflect many countries' current capacities to produce and export sugar. In addition, the current allocation process has resulted in fewer sugar imports than allowed under the tariff-rate quota. From 1996 through 1998, U.S. raw sugar imports averaged about 75,000 tons less annually than the amount USDA allowed USTR to allocate under the tariff-rate quota. According to domestic refinery officials, this shortfall[19] has exacerbated recent declines in the overall availability of raw cane sugar in the U.S. market. USTR could adjust its current allocation method or consider using other allocation methods that would (1) better reflect the current production capacities of countries exporting sugar to the United States and (2) close the gap between the allowed quota and the amount of sugar actually imported.

Allocations Under the Tariff-Rate Quota Do Not Reflect Countries' Current Production and Export Capacities

USTR allocates the tariff-rate quota for raw sugar using a method known as the historical shares approach, which is consistent with WTO requirements, according to USTR officials. In 1982, the quota for imported raw sugar was divided among 40 countries on the basis of their share of the U.S. market during the 1975-81 period,[20] when imports of sugar were relatively unrestricted. (See app. IV for each country's share of the quota.) The Dominican Republic (17.6 percent), Brazil (14.5 percent), and the Philippines (13.5 percent) were allocated almost half of the quota. These quota allocations do not reflect many exporting countries' current production and export capabilities, as demonstrated in the following ways:

- On average, from 1993 through 1998, 10 of the 40 countries were net importers of sugar. These countries need to import sugar from the world market to meet their own needs and to replace their annual exports to the United States.[21]
- Some countries have substantially reduced their production compared with the amount of sugar they are allowed to export to the United States.

[19]Throughout the remainder of this report, we define shortfall as the amount by which imports are less than the allocated tariff-rate quota.

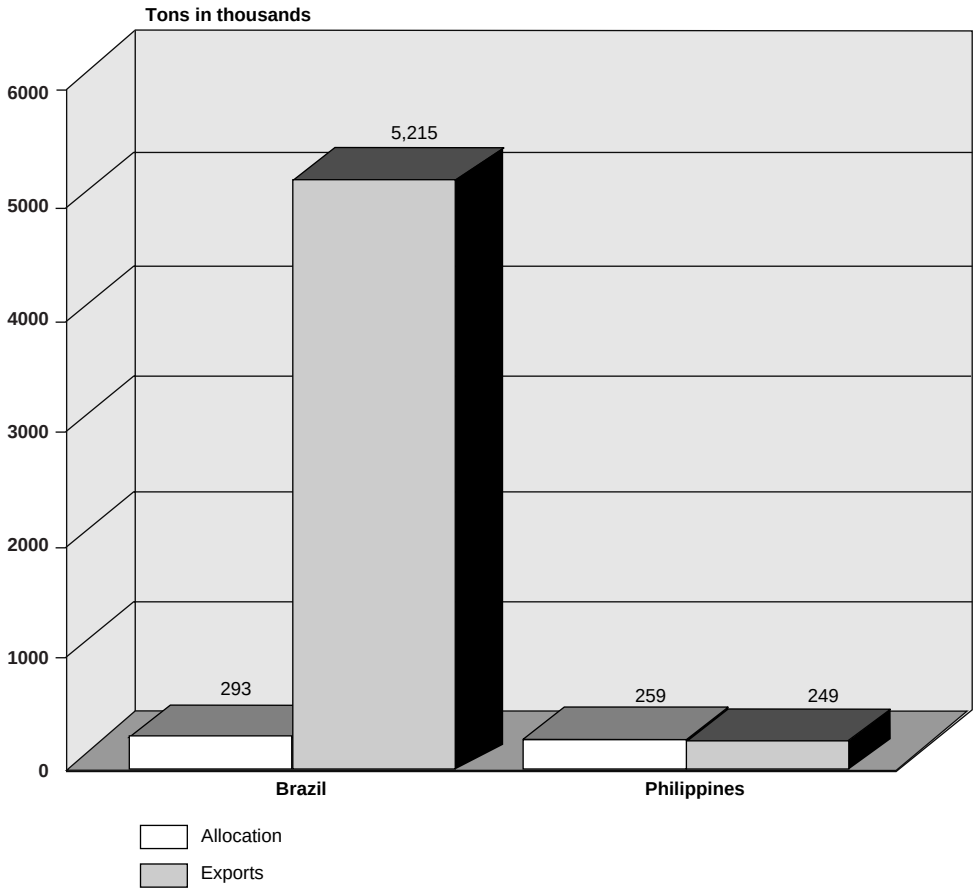
[20]Market shares were determined on the basis of the Olympic average of countries' exports to the United States from 1975 through 1981, according to USDA officials. USDA was responsible for administering the tariff-rate quota allocations until fiscal year 1997.

[21]A country may export only domestically grown sugar to fill its share of the tariff-rate quota.

For example, since the allocations were made, the Dominican Republic and the Philippines have experienced a 50-percent and 27-percent decline in total sugar production, respectively, while their shares of the allocation have remained the same.

- Some countries have substantially increased their production compared with the amount of sugar they are allowed to export to the United States. For example, since the allocations were made, Guatemala, Colombia, and Australia have increased their production by 219 percent, 96 percent, and 61 percent, respectively, while their shares of the allocation have remained the same.
- The quota allocations for 11 of the 40 countries exceeded those countries' average world exports from 1993 through 1998. For example, during this time, Peru was allocated an average of approximately 83,000 tons, while it exported an average of only 72,000 tons of sugar to all countries.
- Several countries with quota allocations are among the world's smallest sugar exporters. Conversely, some countries without quota allocations produce and export significantly more than smaller producing countries with quota allocations.
- Some countries have similar quota allocations despite dramatically different export capabilities. For example, figure 1 shows that Brazil and the Philippines have similar allocations (14.5 and 13.5 percent of the quota, respectively), but Brazil exports about 21 times more sugar than the Philippines.

Figure 1: Allocations of Brazil and the Philippines Compared With Their Average World Exports, 1993-98



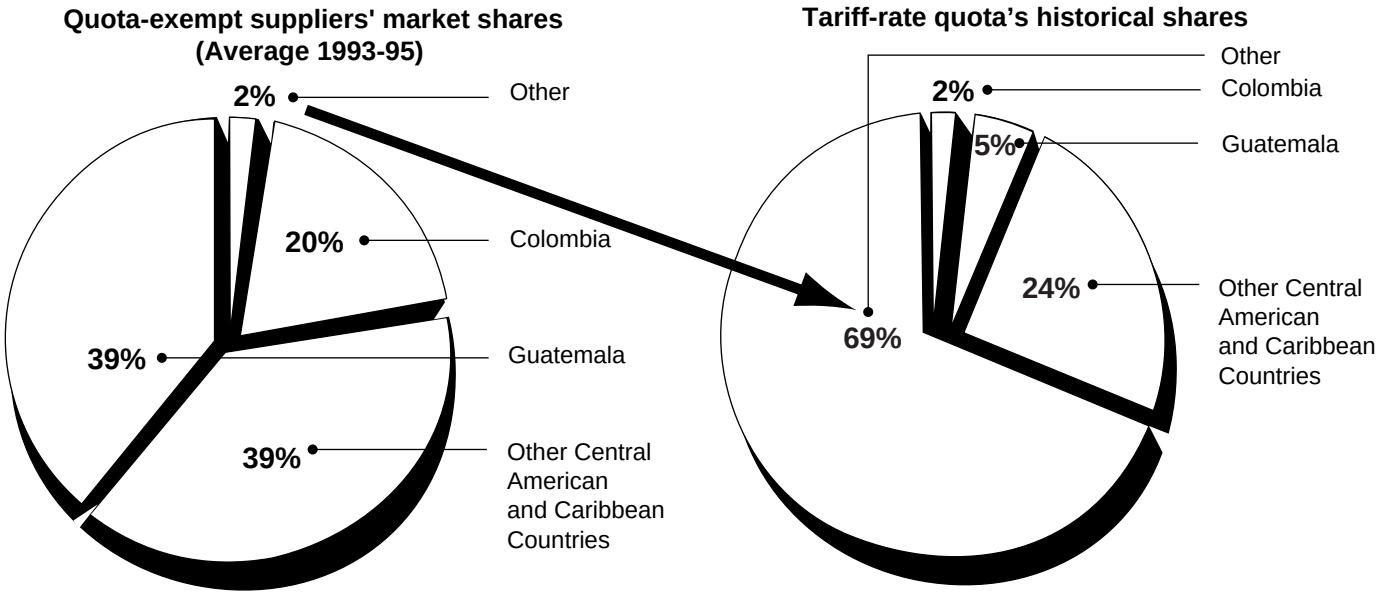
Source: GAO's analysis of USDA's data.

A comparison of exports under the U.S. tariff-rate quota with exports in the U.S. quota-exempt market for raw cane sugar provides another indication that the tariff-rate quota shares are not allocated among the countries according to their current capacity to produce and export sugar. The quota-exempt market is a relatively unrestricted market and provides a market-based incentive for U.S. buyers to select countries that can economically produce sugar and transport it to the U.S. market.[22] This

[22]While sugar imported from most suppliers to the U.S. quota-exempt market is exempt from a 0.625-cent-per-pound tariff, U.S. refiners and other users that import sugar from some countries, such as Australia, are required to pay this tariff. However, this tariff is reimbursed when the refined sugar is exported, according to USDA.

comparison shows that the dominant suppliers in the quota-exempt market have relatively small shares under the tariff-rate quota. As shown in figure 2, Guatemala and Colombia supplied 59 percent of the U.S. quota-exempt market from 1993 through 1995 but have only 7 percent of the tariff-rate quota allocation. In contrast, countries with 70 percent of the tariff-rate quota's allocation collectively represented only 1.6 percent of the exports to the U.S. quota-exempt market. Furthermore, the primary countries supplying the U.S. quota-exempt market exported at least 3 million tons of sugar annually during 1997 and 1998, exceeding the combined U.S. imports under the tariff-rate quota and the quota-exempt market by at least 240,000 tons.

Figure 2: Differences in Exporting Countries' Market Shares in the Quota-Exempt Market and the Tariff-Rate Quota Market



Source: Economic Research Service, USDA.

The Current Allocation Process Resulted in Domestic Shortfalls in Filling the Tariff-Rate Quota

Many countries do not completely fill their sugar quota allocations. As a result, U.S. raw sugar imports averaged about 75,000 tons less than allowed from 1996 through 1998 (see table 4). Because the shortfalls during this period reduced total U.S. sugar supplies by less than 1 percent, they had a minimal effect on the domestic price of sugar. In addition, the

level of shortfalls during the 3-year period has declined. However, U.S. cane sugar refiners told us that these shortfalls have further exacerbated problems associated with steady declines in the supply of raw sugar available for refining in recent years. In particular, they pointed out that 12 of the 22 U.S. cane sugar refineries operating in 1981 have closed and some of the remaining refineries have been operating at between one-half and two-thirds capacity this year.[23] While this is a substantial decline, USTR officials noted that several factors have contributed to the closing of refineries since 1981, including the use of high-fructose corn syrup instead of sugar as a sweetener for soft drinks and the marked increase in consumption of artificial sweeteners. USDA officials told us that the shortfalls are not significant enough to justify changing USTR's current allocation method. U.S. cane sugar refinery representatives also noted that the current allocation process may result in additional costs associated with lower quality sugar and/or higher transportation expenses because they cannot import sugar from their preferred foreign suppliers.

Table 4: U.S. Raw Sugar Imports Under the Tariff-Rate Quota, Fiscal Years 1996-98

Tons in thousands

Fiscal year	Announced tariff-rate quota	Tariff-rate quota allocated	Imports under the tariff-rate quota	Import shortfall[a]	Percentage of tariff-rate quota not filled
1996	2,389	2,389	2,285	103	4.3
1997	2,535	2,315	2,253	63	2.7
1998	1,984	1,764	1,706	58	3.3
Average	2,303	2,156	2,081	75	3.5

[a]The shortfall is the difference between the allocated tariff-rate quota and imports.

Source: GAO's analysis of USDA's data.

Current Allocation Method Could Be Adjusted to Better Reflect Market Conditions and More Completely Fill the Quota

We identified several options to adjust the current method for allocating the tariff-rate quota for raw sugar that may more completely fill it and better reflect countries' production and export capabilities. According to USTR officials, these options are consistent with the nation's WTO commitments; however, each option could be subject to challenge by WTO countries currently holding allocations for the sugar tariff-rate quota. These options may also have other foreign policy implications.

[23]The U.S. Sugar Corporation recently opened a refinery, primarily to refine its own cane sugar.

First, USTR could reallocate unused portions of the quota to countries with the capacity to export more sugar than their original allocation allows. USTR officials told us that if they use this method, they would reallocate quota shares to the countries that already receive an allocation (including countries not filling their quota shares) and the reallocation would reflect countries' historical shares. However, according to USDA officials, reallocations presented a significant administrative burden in 1995 when USDA conducted the last U.S. sugar reallocation under the historical shares method.[24]

Second, USTR could establish a new historical shares period that represents current market conditions. According to USTR officials, reestablishing this period would involve allowing the tariff-rate quota to be filled on a first-come, first-served basis for 3 years and then using this 3-year period as a basis for establishing individual countries' quota shares for subsequent years. This method would update the set of countries exporting to the U.S. market. Furthermore, since the tariff-rate quota would remain open until filled, it could help ensure that the quota would be filled completely. However, this method might encourage countries to rush their shipments to the United States because U.S. raw sugar prices are higher than world prices, causing temporary supply and demand imbalances. To reduce the effects of this rush to the market, the United States could choose to administer the tariff-rate quota using quarterly or monthly allocations rather than an annual allocation, according to USTR officials.

Instead of adjusting the current allocation method, USTR and USDA could choose an alternative method for allocating quota shares, provided that the method is consistent with U.S. obligations under WTO. For example, the United States could choose to permanently administer the tariff-rate quota on a first-come, first-served basis. If administered in this manner, any U.S. trading partner could export raw cane sugar until the annual tariff-rate quota amount is met. Any excess sugar would be subject to the higher tariff. However, using a first-come, first-served process on a permanent basis would be subject to the concerns discussed above in using it to establish a new historical shares period.

Finally, the United States could choose to administer the tariff-rate quota by auctioning the rights to exporting countries. In an auction, foreign countries would submit bids in an effort to gain access to the U.S. sugar

[24]As an alternative to reallocating shortfalls, USDA officials noted that USDA has reserved the right to increase the size of the tariff-rate quota at any time. The officials believe that it would be easier to increase the tariff-rate quota than to reallocate shortfalls.

market. These bids would specify an import amount and fee that would be paid to the U.S. Treasury for these rights. The highest bidders would be awarded the right to ship sugar to the United States. The auctioning method has two key advantages: (1) the United States would gain revenues from the fees paid[25] and (2) the countries with the lowest production and transportation costs would have an advantage in bidding for the rights, thereby generating a set of suppliers that would more likely reflect free market conditions. These countries would be paying for the right to ship sugar to the United States and, therefore, might be more likely to ship sugar, thus removing much of the concern over whether supplying countries would be unable to fill their quota. However, USTR officials do not favor the use of auctions in administering tariff-rate quotas for commodities because of a concern that foreign countries' use of the auction method could adversely affect U.S. exporters if administered, for example, in a nontransparent manner. In addition, the fees that could be collected could be constrained by certain provisions under WTO agreements, according to USTR officials.

Conclusions

In the past we have recommended that the federal government take steps toward moving the sugar industry toward a more open market, gradually phasing out the federal sugar program. Until such actions are taken, we believe that USDA should operate the program in a manner that minimizes costs to sugar users. It currently does not do so. More specifically, in recent years, USDA has continued to target the same stocks-to-use ratios for determining annual tariff-rate quotas, despite the fact that the resulting quotas have maintained domestic market prices that are 2 or more cents higher than necessary for avoiding loan forfeitures. This imposes unnecessary costs on U.S. sugar users—about $400 million annually.

Additionally, USTR's current process for allocating the sugar tariff-rate quota does not ensure that all of the sugar allowed under the quota reaches the U.S. market. Filling the tariff-rate quota may help U.S. cane sugar refiners improve their operating efficiency. However, the significance of the shortfall is arguable, and therefore may not, by itself, justify actions to change the allocation process. The justification for change becomes stronger when considering the additional value of reallocating the quota among countries to reflect current production and exporting capacities, rather than the capacities of more than 17 years ago. Adjustments could be made to the current allocation process, or an

[25]Exporting countries would be willing to pay these fees to obtain the right to import into the United States because U.S. sugar prices are above the world price. Currently, foreign sugar producers who supply sugar to the U.S. market receive the benefits of the quota-induced higher prices.

entirely different process could be introduced that may more completely fill the tariff-rate quota and better reflect world raw sugar market conditions.

Recommendations

To make the sugar program less costly to domestic sugar users, we recommend that the Secretary of Agriculture gradually increase the size of the tariff-rate quota so that the resulting domestic sugar prices are more consistent with the estimated minimum prices for avoiding sugar loan forfeitures.

To better ensure that the tariff-rate quota is completely filled and better reflects world market conditions for raw sugar, we recommend that the U.S. Trade Representative consider changing the current process for allocating the tariff-rate quota in a way that is consistent with U.S. trade agreements while ensuring that any administrative changes are not unduly burdensome. Changes could include such actions as providing a means of reallocating current unfilled quota or selecting an entirely new basis for allocating quota shares.

Agency Comments and Our Evaluation

We provided the U.S. Department of Agriculture and the U.S. Trade Representative with a draft of this report for review and comment. The Department disagreed with our recommendation that it gradually increase the size of the tariff-rate quota and disagreed with much of the analysis supporting this recommendation. It stated that domestic sugar prices are already consistent with the estimated minimum prices needed to avoid loan forfeitures and that therefore there was no need to change the tariff-rate quota. Furthermore, it stated that the recommendation was based on an analysis of national average prices, even though processors respond to regional price differences when deciding whether to forfeit their sugar to USDA. Because regional average prices were not available for cane sugar, we used national average prices. However, our analysis accounted for regional price differences by using the Department's estimates of regional impacts (see app. II.) Therefore, we continue to believe that the Department's restrictive tariff-rate quota for imported raw sugar has resulted in higher domestic sugar prices than necessary for users and that it should be changed as we have recommended. In addition, the Department questioned the need for our recommendation that the U.S. Trade Representative consider modifying the current process for allocating the tariff-rate quota in a way that is consistent with U.S. trade agreements, noting that alternative processes could be administratively

burdensome. To address this concern, we revised our recommendation to state that the U.S. Trade Representative should ensure that any administrative changes are not unduly burdensome. The Department also provided numerous technical comments to clarify what it perceived to be misleading statements, factual errors, and analytical problems in the draft report. We address each of these comments in appendix V, which contains the Department's complete written comments and our response. None of the Department's technical comments resulted in changes that affected the report's conclusions.

We met with U.S. Trade Representative officials, including the Associate General Counsel in the Office of General Counsel. Generally, the U.S. Trade Representative agreed with the report's factual description of the operation of the tariff-rate quota for imported raw sugar. However, the U.S. Trade Representative expressed some reservations about whether our recommendation that it consider changing the current allocation process would be practical or beneficial to the various stakeholders. Furthermore, the U.S. Trade Representative stated that the allocation alternatives, while theoretically possible, would require careful consideration as to whether they could be implemented in a manner that is consistent with commercial and other requirements without introducing unreasonable levels of commercial uncertainty. This was particularly true of the changes involving the use of a first-come, first-served approach. We continue to believe that the inefficiencies associated with the current process merit the U.S. Trade Representative's consideration of alternatives for allocating the tariff-rate quota. However, as discussed in this report, we recognize that any change to the current allocation process needs careful consideration and should be approached cautiously. The U.S. Trade Representative also noted that (1) many factors contributed to the declining number of sugar refineries since 1981 in addition to decreases in the availability of raw cane sugar; and (2) although shortfalls—the amount by which imported sugar is less than the allocated tariff-rate quota—averaged 75,000 tons per year from 1996 through 1998, the level of shortfalls declined during that period. We agree, and we have incorporated these observations into this report.

Scope and Methodology

To describe and evaluate USDA's procedures for setting the tariff-rate quota for imported raw sugar, we interviewed and obtained information from officials involved in the administration of the quota in USDA's Foreign Agricultural Service, Farm Service Agency, Economic Research Service, and World Agricultural Outlook Board. In addition, we discussed the

process for setting the tariff-rate quota and its effects with experts and representatives of the sugar industry—including sugar producer and sugar user groups—and with academia. To compare market prices for sugar with minimum prices to avoid loan forfeitures, we spoke with and obtained information from several agricultural consulting firms, the Congressional Research Service, USDA's Farm Service Agency and Economic Research Service, and other sugar commodity analysts. To describe and evaluate the allocation procedures for the tariff-rate quota, we interviewed and obtained information from cognizant officials of USTR and USDA's Foreign Agricultural Service and Economic Research Service. In addition, we spoke with cognizant officials of the U.S. Department of State and WTO. We did not independently verify the data used in this report. We conducted our work between December 1998 and June 1999 in accordance with generally accepted government auditing standards.

As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 14 days after the date of this letter. At that time, we will send copies of this report to the Senate Committee on Agriculture, Nutrition, and Forestry; the House Committee on Agriculture; and other appropriate congressional committees; the Honorable Dan Glickman, Secretary of Agriculture; the Honorable Charlene Barshefsky, U.S. Trade Representative; the Honorable Jacob Lew, Director, Office of Management and Budget; and other interested parties. We will also make copies available to others upon request. Please contact me at (202) 512-5138 if you or your staff have any questions about this report. Key contributors to this report are listed in appendix VI.

Robert E. Robertson
Associate Director, Food
and Agriculture Issues

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Abbreviations

FAS	Foreign Agricultural Service
ICEC	Interagency Commodity Estimates Committee
USDA	United States Department of Agriculture
USTR	U.S. Trade Representative
WASDE	World Agriculture Supply and Demand Estimates
WTO	World Trade Organization

U.S. Sugar Production and Consumption

Table I.1: Comparison of U.S. Prices, USDA's Loan Rate, and World Prices for Raw Cane Sugar, Fiscal Years 1996-98

Average cents per pound

Fiscal year	U.S. market price[a]	Loan rate	World market price[b]
1996	22.50	18	12.40
1997	22.00	18	11.67
1998	22.09	18	10.80
Average 1996-98	22.19	18	11.62

[a]U.S. market prices are based on futures contract prices for number 14 raw cane sugar on the New York Coffee, Sugar, and Cocoa Exchange.

[b]World bulk spot prices are based on contracts for number 11 raw cane sugar on the New York Coffee, Sugar, and Cocoa Exchange.

Source: GAO's analysis of data from the U.S. Department of Agriculture (USDA) and the New York Coffee, Sugar, and Cocoa Exchange.

Table I.2: U.S. Sugar Production, Raw Sugar Imports, and Sugar Consumption, Fiscal Years 1996-98

Short tons in thousands (raw value)

	Fiscal year 1996	Fiscal year 1997	Fiscal year 1998
Cane sugar	3,454	3,192	3,632
Beet sugar	3,916	4,013	4,389
Total domestic production	**7,370**	**7,205**	**8,021**
Imports under the tariff-rate quota for raw sugar	2,285	2,253	1,706
Quota-exempt imports	540	493	349
Other imports	1	4	85
Total U.S. sugar supply[a]	**10,196**	**9,955**	**10,161**
Total U.S.sugar consumption[b]	**9,896**	**9,983**	**9,992**

[a]Excludes refined sugar imports.

[b]Excludes U.S. sugar exports of 385,000 short tons in fiscal year 1996; 211,000 short tons in fiscal year 1997; and 179,000 short tons in fiscal year 1998.

Source: GAO's analysis of USDA's data.

Table I.3: Comparison of the Stocks-To-Use Ratio With the Domestic Price of Raw Sugar in the Fourth Quarter of Fiscal Years 1986-98

Cents per pound

Fiscal year	Stocks-to-use ratio (percent)	Predicted price[a]	Actual domestic price
1986	19.37	20.83	20.90
1987	16.92	21.71	21.94
1988	15.24	22.32	22.37
1989	13.96	22.78	23.54
1990	13.19	23.06	23.31
1991	16.04	22.03	21.71
1992	15.47	22.24	21.33
1993	17.66	21.44	21.90
1994	13.65	22.89	22.11
1995	12.57	23.28	23.62
1996	15.08	22.38	22.23
1997	14.89	22.44	22.18
1998	16.80	21.76	22.26

[a]The fourth-quarter price was estimated using a regression model developed by USDA's Economic Research Service. The mathematical relationship is expressed in the following manner: Price equals 27.82 minus the product of 0.361 multiplied by the stocks-to-use ratio. See Economic Research Service, USDA, Sugar and Sweeteners: Situation and Outlook, (March 1996, p. 15).

Source: GAO's analysis of USDA's data and futures contract prices for number 14 raw cane sugar on the New York Coffee, Sugar, and Cocoa Exchange.

Estimation of Minimum Prices Needed to Discourage Forfeitures for Raw Sugar Cane and Wholesale Refined Beet Sugar

Under the sugar program, processors can obtain loans from USDA by pledging their sugar as collateral. If domestic sugar prices were too low, processors could forfeit the sugar that secured their loans to USDA rather than repay their loans in cash. Prior to the 1998 crop year, USDA estimated a price called the "minimum cane or beet sugar prices to discourage forfeiture."[1] This price was composed of (1) the legislatively established loan rate for sugar processors of 18 cents per pound for cane sugar and 22.9 cents per pound for refined beet sugar and (2) certain transportation, marketing, and accrued interest costs, along with the penalty charge for loan forfeiture. In general, processors would be unlikely to forfeit sugar if domestic market prices were above this minimum price. However, if market prices were below this level, processors might find it to their economic advantage to forfeit their sugar. As a result, sugar loan recipients would have to receive at least this "minimum" price to make them indifferent to repaying the loan and selling in the marketplace or forfeiting their sugar to USDA. In this appendix, we explain how USDA computed these prices to avoid loan forfeiture for both raw cane sugar and refined beet sugar.

Estimation of Minimum Price Needed to Avoid Raw Cane Sugar Forfeitures

In general, for raw cane sugar, the components of the estimation of the "minimum raw sugar price to discourage forfeiture" consisted of the loan rate, the forfeiture penalty, interest expense, transportation costs, and the location discount. We explain each of these components below. Table II.1 provides an example of the 1997 estimation of USDA's "minimum raw sugar price to discourage forfeiture." It displays the minimum forfeiture prices for the sugar cane growing regions of Florida, Hawaii, Louisiana, Texas, and Puerto Rico.

[1]Because USDA no longer estimates a price to discourage forfeiture, we used estimates provided by an agricultural consulting firm that used USDA's methodology to estimate a minimum price to avoid forfeiture for crop year 1998/99.

Table II.1: Estimation of Minimum Raw Cane Sugar Price Needed to Discourage Forfeitures, 1997 Crop Year

Cents per pound					
Cost category	**Florida**	**Hawaii**	**Louisiana**	**Texas**	**Puerto Rico**
Loan rate	17.88	17.77	18.30	18.06	18.09
Forfeiture penalty	–1.00	–1.00	–1.00	–1.00	–1.00
Net loan proceeds	**16.88**	**16.77**	**17.30**	**17.06**	**17.09**
Cost of loan redemption and marketing					
Interest expense	0.87	0.87	0.89	0.88	0.88
Transportation costs	1.95	2.00	1.21	1.07	0.52
Location discounts	0.00	1.25	0.65	0.20	0.00
Minimum price to avoid forfeitures	**19.70**	**20.89**	**20.05**	**19.21**	**18.49**

Source: Farm Service Agency, USDA.

The minimum price to avoid loan forfeitures for raw cane sugar is estimated using the following items:

- Regional loan rates consist of the national average loan rate for raw sugar cane of 18 cents per pound and an adjustment—positive or negative—for transportation differentials. According to USDA, these differentials consist of freight charges only. Regional loan rates are set by location because USDA attempts to equalize the risk of forfeiture across regions. For example, if an area has lower than average transportation costs, the loan rate would be higher than 18 cents per pound.
- The forfeiture penalty is subtracted from the area loan rate to obtain the net proceeds received from forfeiture. The current farm program requires that a 1-cent-per-pound penalty for cane sugar and a 1.07-cent-per-pound penalty for refined beet sugar be paid if a processor forfeits sugar.[2]
- USDA calculates interest expense on the loan as the product of the regional loan rate times the annual loan interest rate (6.5 percent) times 0.75 (because it is a 9-month loan).

[2]The Omnibus Consolidated and Emergency Supplemental Appropriations Acts for 1999 (P.L. 105-277) directed that USDA not consider the 1-cent penalty when calculating prices that discourage forfeiture. However, since the processor is required by law to pay this penalty, we believe that the processor would consider it when deciding whether to forfeit sugar to the government.

- transportation costs consist of all transportation and distribution costs incurred in moving the sugar to the refiner, including all charges for the commercial sale of the raw cane sugar, such as freight, transportation insurance, transportation taxes, interest on storage, and terminal charges.
- Location discounts are considered a marketing cost to the cane processors, which reflects the fact that they may represent a captive market to some cane refiners. These discounts, required by certain refiners, reflect the higher cost to the cane processor of transporting raw sugar from certain production areas to alternative refiners.

Estimation of Minimum Price Needed to Avoid Wholesale Refined Beet Sugar Forfeitures

The components of USDA's estimation of the minimum beet sugar price to discourage forfeiture consisted of the regional loan rate, the forfeiture penalty, the interest expense on the loan, and the cash discount. Table II.2 is an example of this estimation for sugar beets for the 1997 marketing year.

Table II.2 Estimation of Minimum Beet Sugar Price Needed to Discourage Forfeitures, 1997 Crop Year

Cents per pound

Cost category	Michigan and Ohio	Minnesota and eastern North Dakota	Colorado, Nebraska, eastern Wyoming	Texas	Western North Dakota, Montana, and western Wyoming	Oregon and Idaho	California
Loan rate	23.79	22.73	23.01	23.61	22.19	22.48	23.62
Forfeiture penalty	–1.07	–1.07	–1.07	–1.07	–1.07	–1.07	–1.07
Net loan proceeds	**22.72**	**21.66**	**21.94**	**22.54**	**21.12**	**21.41**	**22.55**
Cost of loan redemption and marketing							
Interest expense	2.47	1.11	2.95	3.03	2.85	2.88	3.03
Cash discounts	0.51	0.46	0.51	0.52	0.49	0.50	0.52
Minimum price to avoid forfeitures	**25.71**	**23.23**	**25.40**	**26.09**	**24.46**	**24.79**	**26.10**

Source: Farm Service Agency, USDA.

In 1997, for wholesale refined beet sugar, USDA's minimum price to avoid loan forfeitures was estimated using the following factors:

- As with the regional loan rates for raw cane sugar, the loan rates for the beet regions reflect transportation differentials and are calculated by adjusting the national average loan rate of 22.9 cents per pound for freight charges. Again, these are adjusted to equalize the risk of loan forfeiture across beet-producing regions.
- The forfeiture penalty of 1.07 cents per pound is subtracted from the loan rates.
- Unlike sugar cane processors, beet processors do not share the interest expense of the government's loan with growers and must recover the entire interest expense of loan repayment in their share of the sugar's selling price. Therefore, interest expense is calculated as the product of the regional loan rate times the annual interest rate (6.5 percent) times 0.75 (because it is the 9-month loan period), all divided by the processor's share of the selling price.
- Beet sugar is normally sold subject to a 2-percent cash discount for all regions.

Unlike raw cane sugar, the minimum price needed to avoid loan forfeiture for beet sugar does not include transportation costs, since beet sugar is priced at the processing level and is not further refined.

Estimation of the Difference Between the Market Price and the Price to Avoid Loan Forfeitures for Raw Cane Sugar and Wholesale Refined Beet Sugar

We estimated the difference between raw cane and refined beet sugar market prices and the prices necessary to avoid loan forfeiture on a regional and on a national weighted average basis for crop years 1996 through 1998. In order to estimate these differences, we compared crop year loan forfeiture prices with market prices for the following fiscal year because sugar grown and harvested in a crop year is sold in the following fiscal year.

Table III.1: Difference Between U.S. Raw Cane Sugar Market Prices and the Minimum Prices Needed to Avoid Loan Forfeitures, by Producing Region and Nationally, 1996-98

Cents per pound

Year	Florida	Hawaii	Louisiana	Texas	Weighted yearly average difference[a]
1996	2.30	1.11	1.95	2.79	2.07
1997	2.39	1.20	2.04	2.88	2.17
1998	2.33	1.15	1.95	2.84	2.11
Average	**2.34**	**1.16**	**1.98**	**2.84**	**2.11**

[a]The weighted yearly average difference in price is weighted by the regional production of cane sugar for 1996 through 1998.

Source: GAO's analysis using USDA's minimum prices to avoid loan forfeitures for crop years 1996 and 1997 and an agricultural consulting firm's minimum prices for crop year 1998. For raw cane sugar market prices, number 14 contract prices on the New York Coffee, Sugar, and Cocoa Exchange were used for fiscal years 1997 through 1999 (fiscal year 1999 was a USDA projection). Data used to estimate weights were obtained from USDA's Sugar and Sweeteners: Situation and Outlook.

Table III.2: Difference Between U.S. Wholesale Refined Beet Sugar Prices and the Minimum Prices Needed to Avoid Loan Forfeitures, by Producing Region and Nationally, 1996-98

Cents per pound

Year	Michigan and Ohio	Minnesota and eastern North Dakota	Colorado, Nebraska, and southeastern Wyoming	Texas	Montana, northwest Wyoming, and northwest North Dakota	Idaho and Oregon	California	Weighted yearly average difference[a]
1996	2.35	4.83	2.66	1.97	3.60	4.79	3.96	4.24
1997	–0.05	2.43	0.26	–0.43	1.20	2.94	2.28	1.97
1998	1.73	4.14	1.55	1.06	2.77	3.71	2.38	3.38
Average	**1.34**	**3.8**	**1.49**	**0.87**	**2.52**	**3.81**	**2.87**	**3.20**

[a]The weighted yearly average difference in price is weighted by the regional production of beet sugar for 1996 through 1998.

Source: GAO's analysis using USDA's minimum prices to avoid loan forfeitures for crop years 1996 and 1997 and an agricultural consulting firm's prices for crop year 1998. Wholesale refined beet sugar prices taken from Milling and Baking News, Midwest and Western markets, fiscal years 1997 through 1999 (1999 price was fiscal year average as of May). Data used to estimate weights were obtained from USDA's Sugar and Sweeteners: Situation and Outlook.

Countries' Tariff-Rate Quota Allocation and Sugar Production and Consumption, 1998

Short tons in thousands

Country	Tariff-rate quota allocation[a] (percent)	Tariff-rate quota allocation	1998 production	1998 consumption	Production minus consumption
Argentina	4.3	72	1,929	1,599	330
Australia	8.3	140	6,137	1,091	5,046
Barbados	0.7	9	51	18	33
Belize	1.1	18	130	15	115
Bolivia	0.8	13	366	254	112
Brazil	14.5	244	17,306	9,700	7,606
Colombia	2.4	40	2,374	1,461	913
Congo	0.3	8	44	39	5
Costa Rica	1.5	25	419	228	191
Cote d'Ivoire	0.3	8	127	182	–55
Dominican Republic	17.6	296	518	331	187
Ecuador	1.1	18	208	413	–205
El Salvador	2.6	44	510	238	272
Fiji	0.9	15	408	57	351
Gabon	0.3	8	22	25	–3
Guatemala	4.8	81	1,896	493	1,403
Guyana	1.2	20	273	35	238
Haiti	0.3	8	11	83	–72
Honduras	1.0	17	288	255	33
India	0.8	13	16,085	18,409	–2,324
Jamaica	1.1	18	206	142	64
Madagascar	0.3	8	105	108	–3
Malawi	1.0	17	215	198	17
Mauritius	1.2	20	725	46	679
Mexico	0.3	28	6,052	4,674	1,378
Mozambique	1.3	22	44	77	–33
Nicaragua	2.1	35	394	204	190
Panama	2.9	49	187	100	87
Papua New Guinea	0.3	8	44	35	9
Paraguay	0.3	8	143	128	15
Peru	4.1	69	507	998	–491
Philippines	13.5	227	1,986	2,094	–108
St. Christopher-Nevis	0.3	8	28	4	24
South Africa	2.3	39	2,660	1,507	1,153
Swaziland	1.6	27	571	248	323
Taiwan	1.2	20	364	540	–176

(continued)

Short tons in thousands

Country	Tariff-rate quota allocation[a] (percent)	Tariff-rate quota allocation	1998 production	1998 consumption	Production minus consumption
Thailand	1.4	24	4,679	1,872	2,807
Trinidad-Tobago	0.7	12	86	93	–7
Uruguay	0.3	8	22	121	–99
Zimbabwe	1.2	20	632	367	265

Note: Each country supplying sugar to the United States under the tariff-rate quota is limited to exporting sugar that solely originated within that country.

[a]Allocations are based on countries' exports to the United States from 1975 through 1981.

Source: USDA.

Comments From the U.S. Department of Agriculture

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

USDA

United States Department of Agriculture

Farm and Foreign Agricultural Services

Foreign Agricultural Service

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JUL 8 1999

Mr. Lawrence J. Dyckman
Director, Food and Agriculture Issues
United States General Accounting Office
441 G Street, N.W.
Room 2T23
Washington, DC 20548

Dear Mr. Dyckman:

Thank you for the opportunity to review and provide comments on the Draft Report RCED-99-209, "Changing the Method for Setting Import Quotas Could Reduce Cost to Users".

USDA initiated a new program to manage the tariff rate quota (TRQ) in fiscal year (FY) 1997. The program is designed to provide an adequate supply of raw and refined sugar to the domestic market at reasonable prices. It has achieved increased administrative efficiency and market transparency by simply establishing the raw sugar TRQ to achieve an ending stocks-to-use ratio target. To accommodate changes in the actual supply and demand during the year, a portion of the TRQ is held in reserve and allowed into the U.S. market at specific intervals if the forecast ending stocks-to-use ratio at those intervals is less than or equal to 15.5 percent.

See comment 1.

The management plan has been successful. USDA managed the program at no cost to taxpayers, because domestic processors have not forfeited loan collateral to USDA's Commodity Credit Corporation (CCC). Average annual raw sugar prices during FY 1997/98 have dropped by 0.72 cents per pound from the average annual of FY 1995, the year prior to the 1996 Farm Bill. Domestic sugar consumption has increased by 5.1 percent in the last three years. Refiners' margins (the price difference between retail/wholesale refined sugar and raw sugar) have reached the highest levels in the recent history. The FY 1997 raw sugar TRQ was the largest since FY 1991. Traditional refiners did not reduce refining capacity during the period; and indeed, a new refiner has entered the domestic market, expecting to capture current margins. Additionally, USDA/USTR added organic sugar to the list of speciality sugars, implemented first-come, first-served access for the specialty sugar TRQ, and expanded it by over 200 percent.

USDA's management of the raw sugar TRQ will remain dynamic and responsive to the needs of all segments of the domestic sugar market. The North American Free Trade Agreement (NAFTA), with its declining high-tier tariff rates for Mexican sugar imports, will likely mean a changed administrative approach. High-tier tariff imports from Mexico during FY 1999 led to a greatly reduced TRQ for the fiscal year. If world raw sugar prices continue at depressed levels next fiscal year, high-tier tariff imports from Mexico may be sufficient to hold the raw sugar TRQ at the World Trade Organization (WTO) minium. USDA will adapt its management approach to accommodate such change.

See comment 2.

See comment 3.

However, the GAO report suggests that USDA and USTR make unjustified changes that would, if heeded, significantly increase administrative costs and could jeopardize the economic well-being of producers in some regions. The recommended changes disregard the effects of the administrative adjustments taken by USDA since the 1996 Farm Bill, as well as current trade agreements that will dictate changes in USDA's administration of the raw sugar TRQ.

GAO Recommendation for USDA:

Recommendation:

To make the sugar program less costly to domestic sugar users, we recommend that the Secretary of Agriculture gradually increase the size of the tariff-rate quota so that resulting domestic sugar prices are more consistent with the estimated minimum prices for avoiding sugar loan forfeitures.

USDA response:

We disagree with the GAO recommendation, because domestic sugar prices are already consistent with estimated minimum prices needed to avoid loan forfeiture. The GAO's own report presents data substantiating the USDA position.

The GAO report bases its recommendation on analysis of national annual average prices. However, USDA recognizes regional price differences to which processors respond when deciding whether to forfeit collateral under CCC loan.

Technical Comments–Misleading Results

Now on p. 2.

Now on p. 5.

Now on p. 7.

Now on p. 9.

1. Page 2, first paragraph, last two sentences:
2. Page 5, second to last sentence in first paragraph:
3. Page 7, last sentence of second paragraph:
4. Page 9, last paragraph:

See comment 4.

See comment 5.

The GAO makes statements similar to the following on several occasions: "From 1996 through 1998, domestic sugar prices were over 2 cents more per pound than was needed to avoid sugar loan forfeitures." In making such statements, the GAO has used national annual average prices, while processors under loan respond to local prices when considering forfeiture. The GAO later contradicts itself when it states on page 9 of the report that "The spread [refined sugar price minus the estimated forfeiture rate] was somewhat smaller in other regions and, in fact, was slightly negative [below the level needed to avoid forfeitures] in 1997 [crop year or FY 1998] in two of the seven regions where production was smaller."

Now on pp. 10-13.

See comment 6.

5. Pages 10-12:

GAO's recommendation to establish the raw sugar TRQ on a first-come, first-served basis or to auction the right to supply the domestic market with foreign-produced sugar with the intent of providing a higher TRQ fill rate is completely irrelevant with respect to the TRQ shortfall. USDA includes an estimate of shortfall in the WASDE report, which directly affects the amount of sugar coming in under the raw sugar TRQ in the current year through the tranche administrative system and in the succeeding year through establishment of the TRQ. If USDA needs additional sugar in the U.S. market, it can increase the size of the TRQ at any time.

Now on p. 10.

See comment 7.

6. Page 10, paragraph 1:

The GAO report fails entirely to make the case for changing the present administration of the TRQ shortfall. Their failure stems from not recognizing the accounting of supply and utilization in determining the size of the TRQ. If there is a shortfall in a particular year, the estimate of total supply of sugar for that year is reduced by the amount of the shortfall. All else constant, the estimate of ending stocks will be reduced by the same amount. The estimate of ending stocks constitutes the forecast of beginning stocks for the next year. Forecasted beginning stocks, production, deliveries, exports, and non-TRQ imports are the basis for setting the next TRQ. If the forecast of total supplies is reduced because of the previous year's shortfall (via lower beginning stocks), the following year's TRQ will be that much larger in order to reach the 14.5 percent stocks-to-use ratio target used in setting the initial TRQ.

Technical Comments--Analytical Problems

Now on pp. 1-2.

1. Page 2, middle of the first paragraph:

GAO states that "Generally speaking, a low stocks-to-use ratio...resulted in relatively low tariff-rate quotas and tight domestic supplies of sugar." The ending stocks-to-use ratio is an indicator of supply availability to the market, and all else constant, a change in the level of the TRQ causes the stocks-to-use ratio to change in the same direction, because of its effect on available supplies.

USDA set the size of the FY 1997 TRQ at the highest level since FY 1991, and the stocks-to-use target in setting the TRQ remained the same for FY 1998 and FY 1999.

Now on p. 3.

See comment 8.

2. Page 3, paragraph 2:

The GAO failed to identify and focus discussion on USDA's mandate to provide adequate supplies of sugar to meet domestic demand at "reasonable prices."

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See comment 9.

The GAO did not note the change to raw and refined sugar TRQs resulting from the Uruguay Round Agreement nor the corresponding minimum access requirements that were part of the Uruguay Round Agreement, and the North American Free Trade Agreement (NAFTA). The changes are important because they provide USDA with two TRQs that could be used to supplement the U.S. market; and it is quite likely that sugar refiners and industrial sugar users will have divergent interests regarding the size of the respective TRQs if price is their only consideration, as implied in the GAO report.

See comment 10.

In the course of its argumentation, GAO ignored the extensive results of two public reviews of the USDA's administration of the raw and refined TRQs. The basis of the TRQ administrative plan established in FY 1997 is to provide adequate supplies of sugar at reasonable prices by targeting sugar stocks-to-use levels. USDA requested comment on its TRQ administrative approach each year prior to setting the TRQs. Omitting reference to these reviews leads to a mis-characterization of USDA performance in TRQ administration.

See comment 11.

Additionally, the GAO overlooks the fact that the high-tier tariffs on raw and refined sugar have been set on a declining schedule that will leave a raw sugar high-tier tariff of 15.36 cents per pound and a refined sugar high-tier tariff of 16.21 cents per pound in calendar year 2000. More importantly, the report fails to consider the implications for high-tier tariff sugar imports arising from the NAFTA. The NAFTA provisions represent the largest challenge to the present system of administering the TRQ. As a result of the NAFTA, the high-tier tariffs on imports of Mexican sugar will decrease to zero by calendar year 2008, quite possibly altering the need and type of TRQ administration.

Now on p. 4.

3. Page 4, first paragraph:

See comment 12.

The GAO does not recognize relatively domestic higher refining margins compared to the world market. During the period of study by the GAO, the domestic refining margin was considerably higher than the refining margins in the world market. That differential between the refining margins accrues to cane sugar refiners operating in the United States and is a result of USDA's administration of the sugar TRQs. Refining margins under the current administrative approach have reached the highest levels in recent history.

See comment 13.

Throughput and margins have been sufficient, and sufficiently consistent during the period of the GAO report, that there have not been any reductions in domestic raw sugar refining capacity. To the contrary, domestic cane sugar refining capacity increased during the period and there has been considerable consolidation within the industry. Savannah Foods and Industries was purchased by Imperial Holly Corporation, and Refined Sugars Incorporated was purchased by Florida cane sugar farmers. Additionally, U.S. Sugar Corporation, formerly a producer of raw cane sugar only, built a refinery that is designed

to produce about 550,000 tons of refined sugar. These changes to the domestic market may be more important than any TRQ administrative approach taken by USDA. However, they were not examined or even mentioned in the GAO report.

Now on p. 4.

See comment 14.

4. Page 4, paragraphs 2 and 3:

The GAO report takes an incomplete view of the sugar program by ignoring benefits to producers, processors, domestic refiners, industrial users, and consumers. A complete analysis would emphasize the net costs to society rather than selectively focusing on a negative factor potentially affecting particular groups (sugar refiners and industrial users of sugar). In its earlier study, GAO reported net costs of $291 million per year between 1989 and 1991, however, the message in this paragraph of the GAO report focuses on the estimated gross costs of the sugar program ("over $1 billion"). Significant research exists regarding the effects of the program for producers, processors, industrial users, refiners, and refined sugar consumers. It is not clear that GAO attempted to update its review of relevant literature, instead relying on its outdated analysis of over 6 years ago.

Now on p. 5.

See comment 15.

5. Page 5, paragraph 1, second sentence:

The report states that "USDA sets the tariff-rate quota at the beginning of each fiscal year using a formula that is intended to achieve a year-end stocks-to-use ratio of 14.5 percent." Under the formula USDA uses to set and administer the TRQ, the resulting ending stocks-to-use ratio for FY 1997 was 14.9 percent and 16.8 percent for FY 1998. Both year-ending stocks-to-use ratios are above the average for the previous 10 years (about14.5 percent), and the 14.5 percent stocks-to-use ratio noted by GAO.

Now on p. 6.

See comment 16.

6. Page 6, paragraph 2:

The GAO report lacks clarity regarding who sets the TRQ and allocates the TRQ tranches. Although there are elements of the procedure in the report, the report introduces confusion about the role of USDA's Interagency Commodity Estimates Committee (ICEC). The ICEC meets every month to project elements of domestic sugar supply and demand. The sugar ICEC is not unique - there are ICECs for most major U.S.-produced farm commodities and livestock products. The ICEC is the way the USDA insures accurate and unbiased forecasting of supply, demand, and trade of the U.S. agricultural sector. Price-Waterhouse recently completed a thorough audit of the ICEC process, and was positive in its findings.

See comment 17.

The GAO suggests that the sugar ICEC has some mysterious role in the TRQ process, because it does not publish its minutes. It circulates minutes among committee members and publishes its reasoning for making changes to the forecasts in the narrative portion of

the World Agricultural Supply and Demand Estimates (WASDE) report. The Economic Research Service (ERS) includes in its Sugar and Sweetener Situation and Outlook Report a chapter entitled "U.S. Sugar." This chapter reviews carefully all components of the supply and demand situation. The chapter is approved through the ICEC and must be totally compatible with the latest WASDE. The Foreign Agricultural Service uses these forecasts to establish the size of the raw and refined TRQs.

Now on p. 8.

See comment 18.

7. Page 8, last sentence of the last paragraph:

The GAO report states that "We found that the market price for refined beet sugar averaged more than 3 cents higher than the minimum price needed to avoid forfeiture,." However, it is not clear why the GAO does not recommend that USDA increase the refined sugar TRQ to reduce the 3-cent difference.

Now on p. 8.

See comment 19.

8. Page 8, last sentence in the first paragraph:

The GAO states that "These market prices [average annual raw sugar prices] indicate that the tariff-rate quota was more restrictive than necessary to keep domestic sugar prices above the minimum price to avoid sugar loan forfeitures." The GAO did not adequately discuss the data found in their own Table III.2, which clearly shows refined sugar prices well below forfeiture levels in Michigan/Ohio and Texas during FY 1997. The fact that USDA uses the raw sugar TRQ to establish sufficient supplies of raw sugar setting the framework that prevents forfeitures of refined sugar is an important factor not discussed by the GAO.

Now on p. 8.

See comment 20.

9. Page 8, last paragraph:

The GAO report states that "Table 3 shows the differences...suggesting again that the tariff-rate quota was unnecessarily restrictive for operating the sugar program without forfeitures." Table 3 uses national average annual prices, while processors respond to market prices at the local level and at the time of sale, which are somewhat better depicted by GAO's Table III.2. Please note again that prices in Michigan/Ohio and Texas were below forfeiture during 1997.

Now on p. 9.

See comment 21.

10. Page 9, last paragraph:

The GAO suggests that USDA's administration of the raw sugar TRQs created a 2-cent per pound windfall for domestic producers and exporters, and cost "sugar users... $200 million annually for each penny in excess of the estimated price needed to avoid forfeitures". However, it is generally accepted that over the medium-to-long term, costs are ultimately borne by the consumer and not by intermediate users of the upstream product.

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Now on pp. 12-13.

See comment 22.

11. Page 12, first paragraph:

The report states that "A comparison of exports under the tariff-rate quota with exports in the quota-exempt market for raw cane sugar provides another indication that the tariff-rate quota shares are not allocated among the countries according to their current capacity to produce and export sugar." The GAO is misguided in assuming that imports under the "quota exempt" program could be used to indicate current production and export capacity. Exports from two of the most important exporters, Australia and Brazil, do not figure significantly into U.S. imports under the U.S. Refined Sugar Re-Export Program (program), which the GAO calls the "quota exempt" program. Instead, exporters such as Guatemala and Colombia are prominent exporters into the program. Imports of raw sugar from Australia and Brazil are assessed a low-tier tariff of 0.625 cents per pound by the U.S. Customs Service, while almost all other imports under the raw sugar TRQ enter duty free. The money from the tariff is pooled by the refiner importing the raw sugar and can be drawn back when that refiner exports sugar under the program. As a result, refiners rarely bring sugar from Brazil or Australia in under the program as the increase in the pool monies would be neutralized by the export of the Australian or Brazilian sugar.

A much better proxy for exports that might occur into the U.S. market in the absence of the U.S. raw sugar TRQ would be the Canadian market. The Canadian market is essentially a free market for sugar. In that market, the Australians have dominated during the past five years, providing over half of Canadian imports. Colombia and Guatemala have only had a minor presence in that market during the same period. It should be added that the use of a proxy market is not a WTO-acceptable basis for allocating a TRQ.

Now on pp. 10-12.

See comment 23.

12. Pages 10-12:

The GAO report attempts to make the case that, because of current shortfall administration, refiners have not had adequate supplies of sugar. It should be noted that the USDA has the authority to increase the TRQ at any time if conditions warrant. The current allocation system does not hinder the USDA in its mandate to supply the domestic market.

See comment 24.

Regarding shortfalls in filling the TRQ, the GAO study suggests USTR consider "reallocating unfilled quota". However, reallocating the unfilled portion of the raw sugar TRQ would increase the cost of administering the TRQ without providing any substantive benefits to the raw sugar market. Reallocation must be conducted at the end of the fiscal year when exporters know and could convey to USTR their shortfall positions. At that late date, the small quantity of additional sugar coming into the market would be counted when establishing the next TRQ. Certainly, increasing the size of the raw sugar TRQ, when and if USDA determines that additional sugar is needed in the domestic market, provides a great deal more administrative flexibility, practicality, transparency, timeliness, and precision.

Now on p. 14.

See comment 25.

13. Page 13, paragraph 1:

The GAO cites losses in sugar refining capacity since 1981, yet USDA estimates that refiners have increased capacity by about 8 percent during GAO's period of consideration. The increase is consistent with higher refiner margins during this period.

Technical Comments--Factual Errors in the Draft Copy

Now on p. 1.

1. Page 1, paragraph 1, last sentence:

See comment 26.

The report refers to sugar producers being allowed to forfeit loans when the loans are available only to processors.

Now on p. 2.

2. Page 2, paragraph 1, first sentence:

See comment 27.

The report is factually incorrect in that it implies that the administration of the sugar TRQ is formally linked to avoidance of loan forfeitures to the CCC. There are no provisions in the 1996 Farm Act (Title I, Subtitle D, Chapter 2) directing USDA to avoid forfeitures. The USDA authority to set the level of the raw and refined TRQs is contained in Additional U.S. Note 5 of the Harmonized Tariff Schedule of the United States and is not part of the U.S. sugar program.

Now on pp. 2-3.

3. Page 3, first paragraph, first sentence:

See comment 28.

The report states that "The United States and many other countries have protected their domestic sugar producers (growers and processors of cane sugar and beet sugar) from lower world prices." However, a more detailed presentation is appropriate to help the reader understand the magnitude of the world subsidy problem for domestic producers. Sugar producers around the world benefit from a variety of programs designed to promote the growth of domestic sugar industries, facilitate exports, as well as to protect the domestic sugar industries from the effects of market distorting policies perpetrated by certain exporting countries. Examples of such trade and production distorting programs and policies are included in the following table.

SUGAR: FOREIGN POLICIES AND PRACTICES AFFECTING TRADE

Countries	Practice/policy	Effect on Sugar Trade
EU, South Africa, Mexico	high internal price supports, export subsidies	Export subsidies reduce export prices to enable surplus domestic sugar, produced under artificially high support prices, to be sold on the lower-priced world market. EU subsidized exports alone account for about 20% of world trade in sugar. Under the Uruguay Round Agreement, the EU's maximum allowable quantity of subsidized sugar exports is 1,277,000 metric ton by the year 2000, 340,000 tons below the average in 1986-90. This does not include exports of sugar of ACP or Indian origin on which the EU made no reduction commitments (i.e., exports of 1.6 million tons in the 1986-90). South Africa will reduce its quantity of subsidized exports by 200,000 tons to 702,208 tons by the year 2000. Mexico has subsidized exports and is subsidizing raw sugar storage.
Australia, Brazil, China, India	state trading enterprises (STEs)	STEs support domestic producers through buyer-seller arrangements, marketing quotas, dual-pricing arrangements, and other quasi-government mechanisms which isolate domestic producers from foreign competition. STEs were not included in the Uruguay Round Agreement, but negotiations on STEs are anticipated in the next round of WTO trade negotiations.
Developing countries	high tariffs, lower labor costs and standards, and weak environmental standards for sugar growers	Developing countries are major producers and exporters of sugar, representing nearly 60% of production and trade. Import protection and lower government standards stimulate continued dependence on sugar as a mainstay of their agricultural sectors. Their cost advantages cannot be met by developed countries which are forced to match their lower prices on the world market.
Non-WTO members--China, Russia	independence from international rules	Non-WTO members are not subject to WTO market access, internal support, and export subsidy disciplines, or WTO tariff bindings which attempt to level the playing field for world sugar producers and exporters.

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Now on p. 3.

4. Page 3, paragraph 1, last sentence:

The report states that "The Federal Agriculture Improvement and Reform Act of 1996, commonly known as the1996 Farm Act, modified the sugar program in part by (1) legislatively establishing the loan rate at 18 cent per pound". However, the 1996 Farm Act did not modify the loan rate for raw sugar.

See comment 29.

The GAO states that by "limiting processors' opportunities to forfeit their sugar by not allowing such forfeitures if the tariff-rate quota is less than 1.5 million tons." However, the sugar TRQ that is established at the beginning of the fiscal year must be greater than1.5 million short tons, raw value (STRV) for the loan program to be non-recourse.

See comment 30.

The GAO report omitted discussion of the1-cent penalty per pound of raw sugar and the 1.07 cents per pound penalty for refined sugar when it is forfeited to the CCC, which were, in fact, changes in the sugar program.

Now on p. 4.

5. Page 4, paragraphs 2 , 3 and generally:

See comment 31.

The GAO report does not define the term "sugar users." It seemingly includes refiners and industrial purchasers of refined sugar while excluding consumers. It is generally accepted that the medium-to-long term, costs are ultimately borne by the consumer and not by intermediate users of the upstream product. Because the sugar TRQ is administered in a nondiscriminatory manner (particular firms are not favored), and also because the Sugar and Sugar-Containing Products Re-export Programs allow domestic firms to be internationally competitive, costs are passed on to the domestic consumer in the form of higher prices. The argument often made by sugar-producing interests is that industrial users of sugar would not immediately pass the cost savings of greater and less-costly sugar supplies to the consumer.

Now on p. 7.

6. Page 7, first complete sentence of the first paragraph:

See comment 32.

GAO states that "Specifically, a 15.5 percent stocks-to-use ratio is associated with a market price of 22.22 cents per pound of raw sugar and a 14.5 percent stocks-to-use ratios is associated with a market price of 22.59 cents per pound." However, the forecast price is only associated with fourth quarter fiscal year prices. Additionally, GAO fails to speak to the statistical reliability associated with those forecasts.

Now on p. 7.

7. Page 7, second complete sentence of the first paragraph:

See comment 33.

GAO states that "By using these stocks-to-use ratios to establish the tariff-rate quota each year, USDA has effectively maintained an average domestic sugar price of 22.19 cents from 1996 through 1998." However, the USDA did not adopt the current stocks

management approach until FY 1997. A much more appropriate comparison would have been to use the average of the two years preceding the last two complete years under the current administrative approach. The averages then are 22.63 cents per pound for FY 1995/96 versus 22.05 cents per pound for FY 1997/98.

If you have any questions, please contact Stephen Hammond, Director, Import Policies and Programs Division, Foreign Agricultural Service.

Sincerely,

PATRICK M. STEEL
Acting Administrator
Foreign Agricultural Service

GAO Comments

The following are GAO's comments on USDA's letter dated July 8, 1999.

1. USDA's claim of a decline of 0.72 cents per pound in the price of raw sugar overstates the reduction achieved under its new management plan. The domestic price for sugar in fiscal year 1995 was unusually high—23.62 cents per pound—because of problems in administering the tariff-rate quota that resulted in a substantial shortfall in the tariff-rate quota. Furthermore, U.S. refining margins (revenues less costs) are affected by factors in addition to the sugar program, such as recent consolidations in the industry. In the years just prior to the period we reviewed, U.S. refining margins were much lower and even negative in certain months.

2. We do not believe that our recommendation to the Secretary of Agriculture to increase the size of the tariff rate quota would result in any administrative costs because USDA would continue to use its current process. We agree that the implementation of this recommendation could increase the risk to the economic well-being of some sugar beet producers. As a result of lower domestic prices, some sugar beet processors could decide to forfeit their sugar to the government. However, producers in the primary cane sugar and sugar beet regions generally would still obtain prices at least equal to the price to avoid forfeiture. Furthermore, our recommendation states that the size of the tariff-rate quota should be increased gradually, enabling sugar beet growers to adjust their planting strategy.

3. We recommended that the United States Trade Representative (USTR) consider options for allocating the tariff rate quota. As part of that consideration, USTR should evaluate the administrative burden associated with alternative allocation processes. We have modified our recommendation to note that any administrative changes should not be unduly burdensome.

4. Our draft report recognized that processors respond to local prices when considering whether to forfeit sugar program loans, and we took this into account in our analysis. Because regional market price data for cane sugar were not available, we compared annual average market prices with regional minimum prices to avoid loan forfeitures. (See app. III.) In addition, regional loan rates were adjusted to estimate the minimum prices to avoid loan forfeitures to account for regional differences in prices caused by such factors as transportation costs and regional cash discounts. For beet sugar, we did not have market prices for each growing region, but we were able to use separate prices for the midwestern and

western markets. (See app. II.) Furthermore, we weighted market prices and prices to avoid loan forfeitures by production in that region in order to obtain an estimate of the impact of the price difference. These regional estimates were adjusted to account for such factors as transportation cost differences and regional cash discounts.

5. We did not contradict ourselves in noting that two sugar beet growing regions had slightly negative spreads when comparing their market prices with the price to avoid forfeiture. These regions accounted for only 9 percent of sugar beet production, and the negative prices occurred in 1997 but not in 1996 or 1998. Prices in the primary cane sugar and beet sugar regions generally were more than 2 cents higher than the price needed to avoid forfeiture. Furthermore, our recommendation states that the size of the tariff-rate quota should be increased gradually, enabling sugar beet growers to adjust their planting strategy.

6. We recommended that USTR consider options for allocating the tariff-rate quota and did not recommend a specific approach. We believe these options are relevant because they could reduce the amount of shortfalls and better reflect the world market for raw sugar. Although USDA states that it accounts for these shortfalls in its quota-setting process, the fact remains that there continue to be shortfalls each year. We believe that the method of quota allocation can play a role in determining whether the tariff-rate quota is completely filled, especially if shortfalls are not reallocated and if the tariff-rate quota is not increased when a shortfall becomes evident.

7. As our report shows, there is no need to have a shortfall in the tariff-rate quota if an alternative allocation method is used. The current system is a workaround to compensate for the inability of some countries to fill their allocation. Furthermore, USDA has not adjusted the tariff-rate quota in recent years to close the gap between imports and the quota. This gap has exacerbated declines in recent years in the overall availability of raw cane sugar in the U.S. market, according to domestic sugar refinery officials.

8. USDA did not articulated a definition of “reasonable prices” or provided a basis for its use of a stocks-to-use ratio of 15.5-percent, which is associated with a domestic raw sugar price of 22.22 cents per pound. Our analysis is predicated on the minimum price needed to avoid loan forfeitures, which is associated with the legislatively mandated loan rate of 18 cents per pound for raw cane sugar plus regional transportation and other costs.

9. We recognize that trade agreements have affected USDA's implementation of the sugar program. We did not specifically examine the tariff-rate quota for imported refined sugar in this report because USDA has set it at about 28,000 tons annually, compared with an annual average of 2.3 million tons of imported raw sugar. USDA primarily uses the raw sugar tariff-rate quota to manage the sugar program. We have noted this exclusion in the report in response to USDA's comment.

10. USDA is referring to comments that the Foreign Agricultural Service (FAS) obtains annually from domestic sugar producers and users on its plans for setting the tariff-rate quota. We did not refer to these comments in our report because they advocate stocks-to-use ratios and other administrative adjustments that reflect the sugar producers' and users' economic interests. Therefore, we do not consider the comments to constitute a review of USDA's administration of the tariff-rate quota.

11. We did not discuss the gradual decline in the high-tier tariff (imports outside of the tariff-rate quota) under the Uruguay Round of the General Agreement on Tariffs and Trade because sugar imported under these tariffs is not economical and such imports do not occur. In addition, while we agree that future reductions in the high-rate tariff for Mexican sugar under the North American Free Trade Agreement will likely affect the administration of the tariff-rate quota, we do not address these changes because they were beyond the scope of our review. Currently, USDA accounts for Mexican imports by adjusting the size of the tariff-rate quota and using a 15.5-percent stocks-to-use ratio, which is associated with a domestic market price of 22.22 cents per pound.

12. See comment 1.

13. Our report noted that the U.S. Sugar Corporation opened a new refinery in 1998. While this refinery has initially increased U.S. capacity, other refineries report that they are operating at far less than full capacity—50 percent of capacity in one case—because they have been unable to obtain sufficient supplies of raw sugar.

14. We agree that a welfare analysis of the costs and benefits of USDA's sugar program for domestic producers and sweetener users, which we provided in our 1993 report, is important for accessing USDA's sugar program. However, such an analysis was beyond the scope of our review.

15. We agree that the actual stocks-to-use ratio may vary from USDA's initial target of 14.5 percent. Because we describe 14.5 percent as a target, we did not revise the report in response to this comment.

16. We have modified our report to clarify the roles of FAS and USDA's Interagency Commodity Estimates Committee (ICEC) in setting the tariff-rate quota. The Price Waterhouse review examined the ICEC's process for establishing World Agriculture Supply and Demand (WASDE) forecasts for nine commodities. Although Price Waterhouse observed the ICEC proceedings for sugar, its report does not specifically discuss the sugar ICEC. While USDA states that the ICEC proceedings for sugar are not unique, USDA officials told us that there were differences in the various ICEC proceedings. We were denied specific information on the proceedings for sugar and were not allowed to observe an actual meeting. Furthermore, the chairman of the sugar ICEC told us that the Price Waterhouse representatives had signed an agreement not to discuss the details of their observations regarding the sugar ICEC.

17. We do not take issue with the WASDE sugar forecasts. However, we believe that information on the meetings would help the public understand the sugar ICEC's process for translating its reasoning into quantitative decisions affecting the WASDE forecasts. The sugar ICEC's minutes are too general to understand the basis for the committee's decisions to change its forecasts, and the committee's published explanation does not provide sufficient information on how decisions are reached, such as the econometric models or spreadsheets used.

18. We agree with USDA that another way to reduce the price of refined sugar would be to increase the size of the refined sugar tariff-rate quota, which USDA has set at about 28,000 tons per year. See also comment 9.

19. Our draft report clearly stated that domestic prices for raw cane sugar and refined beet sugar are linked. Although USDA states that it uses the raw sugar tariff-rate quota to establish sufficient supplies of raw sugar, which sets the framework for avoiding forfeitures by beet sugar processors, we note that since the enactment of the 1996 Farm Act, USDA is no longer required to operate the sugar program at no net cost to U.S. taxpayers. See also comments 2, 4, and 5.

20. See comments 2, 4, and 5.

21. In this analysis, we consider "users" as the wholesale or intermediate buyers of cane or beet sugar—food manufacturers and sugar refiners because we cannot determine the extent to which costs (or savings) would be passed on to consumers in the short term. However, we agree with USDA that in the medium- to long-term, these costs would eventually be borne by the final consumer.

22. We believe that we appropriately used the quota-exempt market as an example of how the U.S. market would work if the allocation process more accurately reflected the current world sugar market. As we said in our report, the quota-exempt market allows U.S. buyers to select countries that can economically produce sugar and transport it to the U.S. market. Our point was to show that the current allocation process is out of date—not to suggest that the quota-exempt market should be the basis for allocating the tariff-rate quota. Furthermore, the example of the Canadian market reinforces our point that the current U.S. allocation does not reflect world market conditions. While Australia provides over half of Canada's raw sugar imports, its allocation is only 8.3 percent of the U.S. tariff-rate quota. In contrast, the Philippines produced less sugar than it consumed in 1998, yet its allocation is 13.5 percent of the U.S. tariff-rate quota.

23. See comment 6.

24. It is unclear whether reallocating the unfilled tariff-rate quota late in the year would substantially increase administrative costs. According to a USTR official, that office would not necessarily follow the same reallocation process that USDA used the last time it conducted such a reallocation—in fiscal year 1995. Moreover, while USDA reserves the right to increase the size of the tariff-rate quota at any time, the Department has not adjusted the tariff-rate quota in recent years to close the gap between imports and the quota. As we state in the report, while the significance of the gap is arguable, it exacerbates the availability of raw cane sugar in the U.S. market, according to domestic cane refinery representatives.

25. See comments 1 and 13.

26. We agree that loans are available for processors and have revised the report accordingly.

27. We revised the report to state that the 1996 Farm Act removed the no-cost provision of the U.S. sugar program.

28. While we agree that other countries also have historically protected their sugar markets, the degree of liberalization of other sugar producing and importing nations was beyond the scope of this report. Our objective in this report was to comment on potential options to improve the administration of the current program.

29. We agree with USDA that processors can forfeit their sugar to the government only if the tariff-rate quota is (1) initially set above 1.5 million tons or (2) subsequently increased to above 1.5 million tons. In addition, we note that the initial quota has always been set above that amount. However, in fiscal year 1999, FAS allowed USTR to allocate only 1.28 million tons of sugar, without achieving the 1.5-million-ton minimum requirement for providing processors with the option to forfeit their sugar rather than repay their loans.

30. We revised our report to state that the 1996 Farm Act revised the sugar program to include penalties of 1 cent per pound for raw cane sugar and 1.07 cents per pound for refined beet sugar that is forfeited to the Commodity Credit Corporation.

31. See comment 21.

32. We agree that a stocks-to-use ratio is associated with a fiscal year fourth-quarter market price. Furthermore, the Economic Research Service reported in 1996 that the coefficient of determination, or R^2, for the forecast was equal to 0.68, which indicates that variation the stocks-to-use ratio accounts for 68 percent of the variation that occurred in the fourth-quarter market price.

33. We have revised the sentence in response to USDA's comment to state that the average domestic sugar price was 22.2 cents in 1997 and 1998. We do not believe that it is appropriate to include fiscal year 1995 in our analysis, as USDA suggested . The domestic price that year was unusually high—23.62 cents per pound—because of problems in administering the tariff-rate quota. These problems resulted in the 1997 changes in how the tariff-rate quota is set, which are still in effect.

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